



HEBEI HUAHENG BIOLOGICAL TECHNOLOGY Co.,Ltd  
河北华恒生物科技有限公司

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## Material Safety Data Sheet

### N-Acetyl-L-Cysteine

#### Section 1 - Chemical Product and Company Identification

**MSDS Name:** N-Acetyl-L-Cysteine

**Synonyms:** Acetylcysteine; N-Acetyl-3-Mercptoalanine; Fluimucil; Mercapturic Acid; NAC.

**Company Identification:**

HEBEI Huaheng Biological Technolgy Co., Ltd.

No. 777 Xinghua South Street , Jizhou City, Hebei Province, China

**For information, call:** 0086-318-8628255

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#### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
616-91-1	N-Acetyl-L-(+)Cysteine	Ca 100	210-498-3

#### Section 3 - Hazards Identification

##### EMERGENCY OVERVIEW

Appearance: white solid.

**Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. This is expected to be a low hazard for usual industrial handling.

**Target Organs:** No data found.

**Potential Health Effects**

**Eye:** May cause eye irritation and possible damage.

**Skin:** May cause skin irritation.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Low hazard for usual industrial handling.

**Inhalation:** May cause respiratory tract irritation. Low hazard for usual industrial handling.

**Chronic:** No information found.

#### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear. **Notes to Physician:** Treat symptomatically and supportively.

#### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

Storage temperature  $\leq 30$  °C

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
N-Acetyl-L-(+)Cysteine	none listed	none listed	none listed

**OSHA Vacated PELs:** N-Acetyl-L-(+)Cysteine: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white

**Odor:** none reported

**pH:** Not available.

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:**Negligible.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:**230 deg F

**Decomposition Temperature:**Not available.

**Solubility:** Soluble in water.

**Specific Gravity/Density:**Not available.

**Molecular Formula:**C5H9NO3S

**Molecular Weight:**163.1279

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** High temperatures, incompatible materials, dust generation, excess heat.

**Incompatibilities with Other Materials:** Heavy metals, heavy metal salts, strong oxidizers.  
**Hazardous Decomposition Products:** Carbon monoxide, oxides of nitrogen, oxides of sulfur, irritating and toxic fumes and gases, carbon dioxide.  
**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

CAS# 616-91-1: HA1660000

**LD50/LC50:**

CAS# 616-91-1:

Oral, mouse: LD50 = 4400 mg/kg;

Oral, rat: LD50 = 5050 mg/kg;

**Carcinogenicity:**

CAS# 616-91-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.

**Environmental:** No information reported.

**Physical:** No information available.

**Other:** None.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

US DOT		Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

**TSCA**

CAS# 616-91-1 is listed on the TSCA inventory.

**Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**SARA Codes**

CAS # 616-91-1: immediate.

**Section 313** No chemicals are reportable under Section 313.

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 616-91-1 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**

Not available.

**Risk Phrases:**

**Safety Phrases:**

**WGK (Water Danger/Protection)**

CAS# 616-91-1: 1

**Canada - DSL/NDSL**

CAS# 616-91-1 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

**Section 16 - Additional Information**

**MSDS Creation Date:** 9/02/1997

**Revision #5 Date:** 10/03/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Haide be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Haide has been advised of the possibility of such damages.

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